

COMPLETE SET OF PENDING CLAIMS:

1. (Original) An inhaler for providing a dose of a dry powder pharmaceutical to a patient, comprising:

a dispersion chamber having an open central interior;

at least one bead in the dispersion chamber, with the bead having a characteristic dimension of at least 50 to 90% of an interior height of the dispersion chamber;

an inlet connecting into the dispersion chamber; and

an outlet connecting into the dispersion chamber and spaced apart from the inlet.

2. (Original) The inhaler of claim 1 wherein the dispersion chamber includes an inner wall forming a bead race, and wherein the bead moves around the bead race upon inhalation by the patient.

3. (Original) The inhaler of claim 2 wherein the bead race has a radius of curvature greater than a radius of curvature of the bead.

4. (Original) The inhaler of claim 2 wherein the dispersion chamber has a flat bottom surface and a flat top surface adjoining the bead race.

5. (Original) The inhaler of claim 1 further comprising means for retaining the bead in the chamber.

6. (Original) The inhaler of claim 1 wherein the bead moves around chaotically in the dispersion chamber when a patient inhales on the outlet.

7. (Original) The inhaler of claim 1 further comprising a dose platform adjacent to the inlet, for holding a dose of a dry powder pharmaceutical.

8. (Original) The inhaler of claim 1 further comprising an obstruction in the dispersion chamber to cause the bead to move chaotically.

9. (Original) The inhaler of claim 1 wherein the bead has or acquires a static electrical charge, and particles of the dry powder also have or acquire a static electrical charge of the same polarity, so that the bead and the particles of dry powder repel each other.

10. (Original) The inhaler of claim 1 wherein the dispersion chamber comprises a separate component, installable into, and removable from the inhaler.

11. (Original) The inhaler of claim 1 wherein a plurality of beads are located in the dispersion chamber, and wherein at least one of the beads includes a discontinuity.

12. (Original) The inhaler of claim 11 wherein the bead having the discontinuity is polygonal shaped, and the discontinuity comprises a corner.

13. (Original) The inhaler of claim 11 wherein the bead having the discontinuity comprises a sphere with a flat surface.

14. (Original) The inhaler of claim 1 further comprising means for providing feedback to the patient based on an airflow rate in the dispersion chamber.

15. (Original) The inhaler of claim 1 wherein from 2 to 10 round beads are provided in the dispersion chamber.

16. (Original) The inhaler of claim 15 wherein the beads move around the dispersion chamber at 4000-10,000 rpm.

17. (Original) The inhaler of claim 1 wherein the dispersion chamber has a characteristic dimension that is from 4 to 20 times greater than the characteristic dimension of the bead.

18. (Currently Amended) An inhaler for providing a dose of a dry powder pharmaceutical to a patient, comprising:

- a dispersion chamber having an open central interior region;
- ~~at least one bead in the dispersion chamber, with the dispersion chamber having an interior characteristic dimension that is 4 to 20 times greater than a characteristic dimension of the largest bead in the dispersion chamber;~~
- an inlet and an outlet connecting into the dispersion chamber; and
- a single unit dose blister container supported on the inlet, and containing a single dose of a dry powder pharmaceutical.

19. (New) An inhaler comprising:

- a dispersion chamber having an open central interior;
- a bead race in the dispersion chamber;
- one or more beads in the dispersion chamber;
- an inlet connecting into the dispersion chamber;
- an outlet connecting into the dispersion chamber and spaced apart from the inlet; and

a chamber ring extending partially into the bead chamber, for preventing any bead from moving out of the dispersion chamber and into the outlet.

20. (New) The inhaler of claim 19 wherein the dispersion chamber has a flat bottom surface and a flat top surface adjoining the bead race.

21. (New) The inhaler of claim 19 with a largest bead in the chamber having a characteristic dimension of at least 50 to 90% of an interior height of the dispersion chamber.

22. (New) The inhaler of claim 19 with the open central interior in the same plane as the bead race.

23. (New) The inhaler of claim 1 with the open central interior in the same plane as the bead race.

24. (New) An inhaler comprising:  
a dispersion chamber having an open central interior;  
at least one bead in the dispersion chamber;  
an inlet connecting into the dispersion chamber;  
an outlet connecting into the dispersion chamber and spaced apart from the inlet; and

the dispersion chamber includes an inner wall forming a bead race, and wherein the bead moves primarily, but not exclusively, around the bead race upon inhalation by the patient.

25. (New) The inhaler of claim 24 wherein the open central interior allows one or more beads in the dispersion chamber to substantially move around in the dispersion chamber in an at least partially non-uniform manner.